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OM protein - protein search, using sw model

Run on: June 21, 2002, 08:23:31 ; Search time 93.48 Seconds.

(Without alignments)
91.492 Million cell updates/sec

Title: US-09-351-778A-11

Perfect score: 77
Sequence: 1 MTGSTAPTDYRHTATCL.....LICCLRHRARPPSLLOYD 77Scoring table: OLIGO
Gapop 60.0 , Gapext 60.0

Searched: 747574 seqs, 11107396 residues

Word size : 0
Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Listing first 45 summaries

Database :

A.Geneseq.032802:*

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20: /SIDSI/gcgdata/hold-geneseq/geneseq-emb1/AA1999.DAT:*
21: /SIDSI/gcgdata/hold-geneseq/geneseq-emb1/AA2000.DAT:*
22: /SIDSI/gcgdata/hold-geneseq/geneseq-emb1/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	77	100.0	77 22 AAB61871	Ad2 ADP mutant d17
2	70	90.9	78 22 AAB61869	Ad2 ADP mutant d17
3	70	90.9	87 22 AAB61870	Ad2 ADP mutant d17
4	70	90.9	101 19 AAM78902	Adenovirus death p
5	70	90.9	101 19 AAM75787	Adenovirus death p
6	70	90.9	101 19 AAM61197	Adenovirus death p
7	70	90.9	101 20 AAM98003	Adenovirus death p
8	70	90.9	101 21 AA184407	Adenovirus death p
9	70	90.9	101 22 AAB47551	Adenovirus death p
10	70	90.9	101 22 AAM50206	Adenovirus death p
11	70	90.9	101 22 AAB61866	Ad2 encoded adenov

12	47	61.0	101 19 AAM59925	Adenovirus death p
13	40	51.9	40 22 AAB61873	Ad2 ADP putative 1
14	30	39.0	95 22 AAB61868	Ad6 encoded adenov
15	28	36.4	84 22 AAB61872	Ad2 ADP mutant d17
16	24	31.2	93 22 AAB61867	Ad5 encoded adenov
17	19	24.7	19 22 AAB61874	Ad2 ADP transmembr
18	18	23.4	94 22 AAB61865	Ad1 encoded adenov
19	11	14.3	42 22 AAB61876	Ad2 ADP cytosolic
20	8	10.4	8 22 AAB61875	Ad2 ADP cytosolic
21	7	9.1	67 22 AAB58067	Protonbacterium
22	7	9.1	68 22 AAB17551	Human nervous syst
23	7	9.1	157 21 AAG18744	zebra mays protein f
24	7	9.1	197 20 AAY34853	C. pneumoniae cell
25	7	9.1	197 22 AAU43319	Propionibacterium
26	7	9.1	231 22 AAM83988	Human immune/naema
27	7	9.1	242 21 AAG04903	Arabidopsis thalia
28	7	9.1	242 21 AAG59416	Arabidopsis thalia
29	7	9.1	273 22 AAG05846	Novel human diagn
30	7	9.1	316 21 AAG04902	Arabidopsis thalia
31	7	9.1	316 21 AAG59415	Arabidopsis thalia
32	7	9.1	404 22 ABB65340	Drosophila melanog
33	7	9.1	473 22 AAG36845	Novel human diagn
34	7	9.1	482 21 AAY66786	Soybean sucrose no
35	7	9.1	635 22 ABB66261	Drosophila melanog
36	7	9.1	1401 18 AAY14519	Mouse WRN gene pro
37	7	9.1	1401 19 AAM59454	Mouse WRN helicase
38	7	9.1	1401 20 AAM97841	Human copper/zinc
39	6	7.8	15 22 AAG78731	Human polypeptide
40	6	7.8	38 22 ABO03363	Peptide #11521 enc
41	6	7.8	43 22 ABB44015	Human brain expres
42	6	7.8	43 22 AAM65030	Human bone marrow
43	6	7.8	43 22 AAM77745	Peptide #8090 enco
44	6	7.8	43 22 AAM21656	Peptide #11996 enc
45	6	7.8	43 22 AAM37959	

ALIGNMENTS

RESULT 1	
1 AAB61871	standard. Protein: 77 AA.
ID AAB61871:	
AC AAB61871:	
XX	
XX	
08-MAY-2001 (first entry)	
XX	
XX	
Ad2 ADP mutant d1714.	
DE	
XX	
Adenovirus death protein; ADP; neoplastic; cell death; cancer therapy;	
KW anti-cancer; gene therapy; cytosolic; Ad2; mutant.	
KW	
OS Mastadenovirus.	
XX	
XX	
W0200104282-A2.	
PN	
18-JAN-2001.	
PD	
XX	
12-JUL-2000; 2000MO-US18971.	
PF	
12-JUL-1999; 9905-0351778.	
PR	
XX	
(UYSL-) UNTV SAINT LOUIS.	
PA	
XX	
W01d WSM, Toch K, Doronin K, Tollefson AE;	
PI	
XX	
WPI; 2001-103079/11.	
DR	
XX	
Recombinant vector which is replication-competent in a neoplastic cell	
PT and overexpresses an adenovirus death protein, useful in cancer therapy	
PT when used together with replication-defective adenovirus which	
PT expresses an anti-cancer gene -	
XX	
XX	

PS Example 9; Fig 20; 196pp; English.

CC The invention relates to a recombinant vector (VI) which is replication-competent in a neoplastic cell and which overexpresses an adenovirus death protein (ADP). The vector can be used in a method for promoting death of a neoplastic cell that comprises contacting the neoplastic cell with at least one VI; and a composition comprising VI and a second recombinant anti-cancer gene product, where VI complements replication of the second recombinant virus; or (b) replication-competent in a neoplastic cell. VI, together with one or more replication-defective adenovirus which expresses an anti-cancer gene product, are useful in cancer therapy. Overexpression of ADP by VI results in faster lysis of cells and spread of the virus throughout a cell monolayer than viruses expressing wild-type levels of ADP. The present sequence represents the amino acid sequence of an Ad2 ADP mutant.

XX Sequence 77 AA:

SO

Query Match 100.0%; Score 77; DB 22; Length 77;
 Best Local Similarity 100.0%; Pred. No. 8,7e-69;
 Matches 77; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MTGSIPTPTDYRNTATGLTSALNLPQVNAFVNDNASLDMWFSTALMFVCLIMLIC 60
 |||||||
 Db 1 mtgstlapttdyrintatcgltsalnlpqvnafvndwasldmwfslalmfvcclimwllc 60
 |||||||

Qy 61 CLKRRRAPPSSLLQYD 77
 |||||||
 Db 61 CLKRRRAPPSSLLQYD 77
 |||||||

RESULT 2
 AAB61869 standard; Protein: 78 AA.

XX AAB61869:
 DT 08-MAY-2001 (first entry)
 DE Ad2 ADP mutant dl716.
 XX Adenovirus death protein; ADP; neoplastic; cell death; cancer therapy;
 KW anti-cancer; gene therapy; cytostatic; Ad2; mutant.
 XX Mastadenovirus.
 XX WO200104282-A2.
 PN 18-JAN-2001.
 PD 12-JUL-2000; 2000MO-US18971.
 PF 12-JUL-1999; 99US-0351778.
 PR 12-JUL-1999; 99US-0351778.
 XX (UYSL-) UNIV SAINT LOUIS.
 PA Wold WSM, Toth K, Doronin K, Tollefson AE;
 PI Wold WSM, Toth K, Doronin K, Tollefson AE;
 DR MPI; 2001-103079/11.
 XX

PT Recombinant vector which is replication-competent in a neoplastic cell
 PT and overexpresses an adenovirus death protein, useful in cancer therapy
 PT when used together with replication-defective adenovirus which
 PT expresses an anti-cancer gene -
 XX

PS Example 9; Fig 20; 196pp; English.

CC The invention relates to a recombinant vector (VI) which is replication-competent in a neoplastic cell and which overexpresses an adenovirus death protein (ADP). The vector can be used in a method for promoting death of a neoplastic cell that comprises contacting the neoplastic cell with at least one VI; and a composition comprising VI and a second recombinant anti-cancer gene product, where VI complements replication of the second recombinant virus; or (b) replication-competent in a neoplastic cell. VI, together with one or more replication-defective adenovirus which expresses an anti-cancer gene product, are useful in cancer therapy. Overexpression of ADP by VI results in faster lysis of cells and spread of the virus throughout a cell monolayer than viruses expressing wild-type levels of ADP. The present sequence represents the amino acid sequence of an Ad2 ADP mutant.

CC with at least one VI; and a composition comprising VI and a second recombinant virus which is: (a) replication-defective and which expresses an anti-cancer gene product, where VI complements replication of the second recombinant virus; or (b) replication-competent in a neoplastic cell. VI, together with one or more replication-defective adenovirus which expresses an anti-cancer gene product, are useful in cancer therapy. Overexpression of ADP by VI results in faster lysis of cells and spread of the virus throughout a cell monolayer than viruses expressing wild-type levels of ADP. The present sequence represents the amino acid sequence of an Ad2 ADP mutant.

XX Sequence 78 AA:

SO

Query Match 90.9%; Score 70; DB 22; Length 78;
 Best Local Similarity 100.0%; Pred. No. 7,6e-62;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MTGSIPTPTDYRNTATGLTSALNLPQVNAFVNDNASLDMWFSTALMFVCLIMLIC 60
 |||||||
 Db 1 mtgstlapttdyrintatcgltsalnlpqvnafvndwasldmwfslalmfvcclimwllc 60
 |||||||

Qy 61 CLKRRRAPP 70
 |||||||
 Db 61 CLKRRRAPP 70
 |||||||

RESULT 3
 AAB61870 standard; Protein: 87 AA.

XX AAB61870:
 DT 08-MAY-2001 (first entry)
 DE Ad2 ADP mutant dl715.
 XX Adenovirus death protein; ADP; neoplastic; cell death; cancer therapy;
 KW anti-cancer; gene therapy; cytostatic; Ad2; mutant.
 XX Mastadenovirus.
 XX WO200104282-A2.
 PN 18-JAN-2001.
 PD 12-JUL-2000; 2000MO-US18971.
 PF 12-JUL-1999; 99US-0351778.
 PR 12-JUL-1999; 99US-0351778.
 XX (UYSL-) UNIV SAINT LOUIS.
 PA Wold WSM, Toth K, Doronin K, Tollefson AE;
 PI Wold WSM, Toth K, Doronin K, Tollefson AE;
 DR MPI; 2001-103079/11.
 XX

PT Recombinant vector which is replication-competent in a neoplastic cell
 PT and overexpresses an adenovirus death protein, useful in cancer therapy
 PT when used together with replication-defective adenovirus which
 PT expresses an anti-cancer gene -
 XX

PS Example 9; Fig 20; 196pp; English.

CC The invention relates to a recombinant vector (VI) which is replication-competent in a neoplastic cell and which overexpresses an adenovirus death protein (ADP). The vector can be used in a method for promoting death of a neoplastic cell that comprises contacting the neoplastic cell with at least one VI; and a composition comprising VI and a second recombinant anti-cancer gene product, where VI complements replication of the second recombinant virus; or (b) replication-competent in a neoplastic cell. VI, together with one or more replication-defective adenovirus which expresses an anti-cancer gene product, are useful in cancer therapy. Overexpression of ADP by VI results in faster lysis of cells and spread of the virus throughout a cell monolayer than viruses expressing wild-type levels of ADP. The present sequence represents the amino acid sequence of an Ad2 ADP mutant.

CC cancer therapy. Overexpression of ADP by V1 results in faster lysis of
CC cells and spread of the virus throughout a cell monolayer than viruses
CC expressing wild-type levels of ADP. The present sequence represents the
CC amino acid sequence of an Ad2 ADP mutant.
XX
SQ Sequence 87 AA;

Query Match 90.9%; Score 70; DB 22; Length 87;
Best Local Similarity 100.0%; Pred. No. 8.3e-62;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MCGSTIAPTDTDRNTATGTSALNLPQVHAFFVNDWASLDMMFSLAMFVCLIMMLIC 60
DB 1 mtgstlaptcdyrintatcgtltsalnlpqvhafrvndwasldmmfslalmfvclimmlc 60

OY 61 CLKRRARPP 70
DB 61 clkrtrrapp 70

RESULT 4

AAW78902 standard; Protein: 101 AA.

AC AAW78902;

DT 21-DEC-1998 (first entry)

DE Adenovirus death protein.

XX Carcinoembryonic antigen: transcriptional regulatory element;

KM CEA-TRE: human; promoter; enhancer; vector; cancer; gene therapy;

KM PCR: primer; adenovirus death protein; ADP.

XX Mastadenovirus.

XX MO9839467-A2.

PD 11-SEP-1998.

PF 03-MAR-1998; 98WO-US04133.

PR 02-MAR-1998; 98US-0039763.

PR 03-MAR-1997; 97US-0039763.

PA (CALY-) CALYDON INC.

PI Henderson DR, Lamparski HG, Schuur ER.

DR WPI: 1998-495862/42.

DR N-PSDB; AAV52966.

PT New adenovirus vectors, particularly for cancer therapy - comprising

PT adenovirus gene under transcriptional control of carcinoembryonic

PT antigen transcriptional regulatory element

PS Disclosure: Page 68; 95pp; English.

CC This is the amino acid sequence of adenovirus death protein (ADP).

CC Claimed replication-competent adenovirus (Ad) vectors comprise an

CC Ad gene under transcriptional control of a CBA-TRE. The vectors can

CC be used to detect and monitor samples for the presence of cells that

CC allow a CBA-TRE to function, and to selectively kill such cells,

CC especially malignant cells. Vectors containing an ADP gene (see

CC AAV52966) may be more potent than vectors lacking the gene, making

CC possible more effective treatment and/or lower dosage requirement.

XX Sequence 101 AA;

Query Match 90.9%; Score 70; DB 19; Length 101;
Best Local Similarity 100.0%; Pred. No. 9.3e-62;

Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MCGSTIAPTDTDRNTATGTSALNLPQVHAFFVNDWASLDMMFSLAMFVCLIMMLIC 60
DB 1 mtgstlaptcdyrintatcgtltsalnlpqvhafrvndwasldmmfslalmfvclimmlc 60

OY 61 CLKRRARPP 70
DB 61 clkrtrrapp 70

RESULT 5

AAW75787 standard; Protein: 101 AA.

AC AAW75787;

DT 21-DEC-1998 (first entry)

DE Adenovirus death protein.

XX Probasin transcriptional response element; PB-TRE; rat;

KM androgen receptor; adenovirus; vector; prostate cancer;

KM gene therapy; adenovirus death protein; ADP.

XX Mastadenovirus.

XX MO9839466-A2.

PD 11-SEP-1998.

PF 03-MAR-1998; 98WO-US04132.

PR 02-MAR-1998; 98US-0033333.

PR 03-MAR-1997; 97US-0039762.

PA (CALY-) CALYDON INC.

PI Henderson DR, Lamparski HG, Schuur ER, Yu D;

DR WPI: 1998-506369/43.

DR N-PSDB; AAV57354.

PT New adenovirus vectors, particularly for cancer therapy - comprising

PT adenovirus gene under transcriptional control of a probasin

PT transcriptional regulatory element

PS Disclosure: Page 96; 117pp; English.

CC This is the amino acid sequence of adenovirus death protein (ADP).

CC Claimed replication-competent adenovirus (Ad) vectors comprise an

CC Ad gene under transcriptional control of a probasin transcriptional

CC response element (PB-TRE, see AAV57354). The vector can be used for

CC detecting cells that allow a PB-TRE to function, especially cells

CC expressing an androgen receptor, such as prostate cells. They can

CC be used to confer selective toxicity to such cells. In particular,

CC the vectors can be used for treating cancers such as prostate cancer.

CC Ad vectors containing the ADP gene (see AAV57354) may render the

CC vector more potent, making possible more effective treatment and/or

CC a lower dosage requirement. An Ad vector has been constructed that

CC contains the ADP gene under control of PB-TRE. Cytotoxicity was

CC demonstrated toward LNCaP (prostate carcinoma) cells.
XX Sequence 101 AA;

Query Match 90.9%; Score 70; DB 19; Length 101;
Best Local Similarity 100.0%; Pred. No. 9.3e-62;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 MCGSTIAPTDTDRNTATGTSALNLPQVHAFFVNDWASLDMMFSLAMFVCLIMMLIC 60
DB 1 mtgstlaptcdyrintatcgtltsalnlpqvhafrvndwasldmmfslalmfvclimmlc 60

OY 61 CLKRRRARP 70
 DB 61 CLKRRRARP 70

RESULT 6

AAW61197
 ID AAW61197 standard; Protein: 101 AA.

AC AAW61197;

DT 07-DEC-1998 (first entry)

XX Adenovirus death protein.

XX Adenovirus death protein; ADP; vector; hepatoma; Cancer;

KW alpha-fetoprotein transcription regulatory element; AFP-TRE;

KW hepatocellular carcinoma; hepatoma; gene therapy; human.

XX Mastadenovirus type 2.

PN W09839465-A2.

PD 11-SEP-1998.

PF 03-MAR-1998; 98WO-US04084.

XX 02-MAR-1998; 98US-0039597.

PR 03-MAR-1997; 97US-0039597.

PA (CALY-) CALYDON INC.

PI Henderson DR, Lamparski HG, Little AS, Schuur ER;

DR WPI; 1998-495861/42.

XX N-PSDB; AAV47675.

PT New adenovirus vector, for treating cancers - comprising an

XX adenovirus gene under the transcriptional control of an alpha

XX fetoprotein transcription regulatory element

XX Claim 29; Page 74; 102pp; English.

XX This is the amino acid of the adenovirus death protein (ADP) of

XX of adenovirus type 2. The ADP coding sequence (see AAV47675), with

XX or without the y leader, can be introduced into an adenoviral

XX genome, e.g. in the E3 or E4 region. Inclusion of such a coding

XX sequence in an adenoviral vector significantly enhances the extent

XX of cytotoxicity, cell killing and virus production. The invention

XX provides replication-competent adenovirus vectors which

XX preferentially replicate in cells that express alpha-fetoprotein

XX (AFP), particularly hepatoma cells. The vectors comprise at

XX least one adenovirus gene, preferably a gene that contributes to

XX cytotoxicity, under the transcriptional control of an AFP

XX transcription regulatory element (see AAV47654-55). The vectors

XX are useful for conferring selective cytotoxicity to AFP-expressing

XX cells, especially cancer cells.

XX Sequence 101 AA;

XX Query Match 90.9%; Score 70; DB 19; Length 101;

XX Best Local Similarity 100.0%; Pred. No. 9.3e-62;

XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 MTGSIAPTDTYRNTATGTSALNLPVHAFVNDMSLDMMWFSIALMFVCLIMWLC 60

DB 1 mtgslaptctdyrntatgtsalnlpvhaftvndwasldmmwfsialmfvcilimwlic 60

OY 61 CLKRRRARP 70

DB 61 CLKRRRARP 70

RESULT 7
 AAW98003
 ID AAW98003 standard; Protein: 101 AA.

XX AAW98003;

DT 21-JUN-1999 (first entry)

XX Adenovirus death protein.

XX Enhancer; glandular kallikrein-1; hGK-1; hKIK2; human;

KW prostate cancer; therapy; adenovirus death protein.

XX Mastadenovirus 2.

PN W09906576-A1.

PD 11-FEB-1999.

PF 04-AUG-1998; 98WO-US16312.

XX 03-AUG-1998; 98US-0127834.

PR 04-AUG-1997; 97US-0054523.

PR 02-MAR-1998; 98US-0076545.

PA (CALY-) CALYDON INC.

PI Henderson DR, Schuur ER, Yu D;

DR WPI; 1999-153804/13.

XX N-PSDB; AAX24756.

PT New nucleic acid containing the human glandular kallikrein enhancer

XX - providing increased expression of heterologous sequences in

XX prostatic cells, and related adenoviral vectors for treating

XX prostatic cancer

XX Disclosure; Page 165-166; 179pp; English.

XX This protein comprises the adenovirus death protein (ADP) of

XX adenovirus serotype 2. The invention provides novel adenovirus

XX vectors in which at least one adenovirus gene, preferably one that

XX contributes to cytotoxicity, is placed under transcriptional

XX control of a human glandular kallikrein hKIK2 enhancer

XX transcriptional regulatory element (hKIK2-TRE; see AAX24755). Such

XX vectors are useful for treatment of cancers such as prostate

XX cancer. The ADP gene may render the adenoviral vector more potent.

XX making possible more effective treatment and/or lower dosage

XX requirement.

XX Sequence 101 AA;

XX Query Match 90.9%; Score 70; DB 20; Length 101;

XX Best Local Similarity 100.0%; Pred. No. 9.3e-62;

XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 MTGSIAPTDTYRNTATGTSALNLPVHAFVNDMSLDMMWFSIALMFVCLIMWLC 60

DB 1 mtgslaptctdyrntatgtsalnlpvhaftvndwasldmmwfsialmfvcilimwlic 60

OY 61 CLKRRRARP 70

DB 61 CLKRRRARP 70

RESULT 8
 AAY84407
 ID AAY84407 standard; Protein: 101 AA.

XX AAY84407;

XX 25-JUL-2000 (first entry)
XX
XX Amino acid sequence of an adenoviral death protein.
DE
XX
XX Adenoviral vector; adenovirus gene; transcriptional control;
KW transcriptional regulatory element; TRE; adenoviral propagation;
XX death protein; tumour.
XX
OS Mastadenovirus.
XX
XX WO200015820-A1.
XX
XX PD 23-MAR-2000.
XX
XX PR 10-SEP-1999; 99WO-US20718.
XX
XX PR 10-SEP-1998; 98US-0099791.
XX
XX PR 09-SEP-1999; 99US-0099791.
XX
XX PA (CALY-) CALYDON INC.
XX
XX PI Yu DC, Henderson DR;
XX
XX DR WPI: 2000-271456/23.
XX
XX DR N-PDB; AA29937.
XX
XX PT Adenovirus vectors comprising cell-status specific response elements
XX useful in gene therapy protocols for the treatment of cancers -
XX
XX PS Disclosure: Fig 9; 79pp; English.
XX
XX The present sequence represents an adenoviral death protein, which is
XX used to construct the vectors of the invention. The specification
XX describes adenoviral vectors which comprise an adenovirus gene
XX under transcriptional control of a cell status specific transcriptional
XX regulatory element (TRE). The TRE is preferably one that is
XX essential for adenoviral propagation. The adenovirus vectors
XX may be used for the treatment of a range of tumours such as lung,
XX stomach, breast, colon and rectum, and uterine and cervix cancers.

Sequence 101 AA:
XX

Query Match 90.9%; Score 70; DB 21; Length 101;
Best Local Similarity 100.0%; Fred. No. 9,3e-62;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MGCTAATTDDYRNTATGCTSLANLPOVHAFVNDAALDMMPFSLAFVCLITIMLIC 60
Db |||||||
Dy 1 mcsstapldtyrntatgltalsalnlpvhafvndawslmwwfsialnfvclimmlc 60
QY 61 CLKRRARRPP 70
Db |||||||
Dy 61 clkrrarrpp 70

RESULT 9
AA047591
ID ABA47591 standard; Protein; 101 AA.
AC ABA47591;
DT 07-JAN-2002 (first entry)
DE ADP amino acid sequence.
KW Adenovirus; ADP; replication-competent; adenoviral vector; TRE;
KM transcriptional regulatory element; mutation; deletion; IRES;
KN promoter; internal ribosome entry site; cytotoxic; cancer; bladder.
XX Adenovirus.
OS

XX		MO200173093-A2.
PN		
PD	04-OCT-2001.	
XX		
PF	21-MAR-2001; 2001WO-US09036.	
PR		
XX		
PA	24-MAR-2000; 2000US-192156P.	
PI	(CALY-) CALYDON INC.	
DR	Yu D, Li Y, Henderson DR;	
XX		
XX	WPI: 2001-639234/73.	
PT	N-Psdb: AAMH3535.	
XX		
PT	Replication-competent adenoviral vector, useful e.g. for killing cancer	
XX	cells, contains two genes linked by internal ribosome entry site and	
XX	controlled by target-specific regulator -	
PS		
XX	Disclosure: Fig 9; 148bp; English.	
CC		
CC	This sequence represents adenoviral ADP. The ADP coding sequence may	
CC	be used in the replication-competent adenoviral vector (A) of the	
CC	invention which contains two genes (G1, G2) that are co-transcribed	
CC	as a single mRNA and under control of a heterologous, target cell-	
CC	-specific transcriptional regulatory element (TRE). G2 has a mutation	
CC	in, or deletion of, its endogenous promoter and is controlled from	
CC	an internal ribosome entry site (IRES). The ADP coding sequence may	
CC	be used as G1 or G2. (A) has greater specificity for a target cell	
CC	than a similar vector in which TRE is operably linked to a gene and	
CC	which lacks an IRES. (A) are used to modify the genotype of target	
CC	cells, optionally in vitro with subsequent return of altered cells to	
CC	the host and where G2 is a cytotoxic gene, to confer selective	
CC	Cytotoxicity to target cells, especially for killing cancer cells.	
CC	ADP displays a cytotoxic, particularly cell lysis, function. Also (A)	
CC	are used for diagnosis and monitoring, e.g. detection of bladder cancer	
CC	cells. The target cell-specific TRE ensures that (A) has better	
CC	targeting specificity, with minimal replication in non-target cells, so	
CC	a runaway infection is prevented but production of adenoviral proteins	
CC	in target cells activates and/or stimulates the immune response against	
CC	target cells producing such proteins. The use of an IRES (rather than	
CC	two identical control elements) eliminates the risk of homologous	
CC	recombination and may provide enough extra space for an additional	
CC	(therapeutic) gene.	
CC		
SQ	Sequence 101 AA:	
	Query Match 90.98; Score 70; DB 22; Length 101;	
	Best Local Similarity 100.0%; Pred. No. 9, 3e-62;	
	Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0	
Oy	1 MTGSTATPTTYRMVTATGLTSLALNPOVHAHFVNDDMSLDMMFFSIALMPVCLIMMNIC 60	
Dd		
	1 mgtstaptctdyntatcgtltsalnlpqhahfvdwdsldmwwsfialmfclimnic 60	
Oy	61 CLKRRARRPP 70	
Dd		
	61 clktrrarpp 70	
	RESULT 10	
	AAM50206	
ID	AAM50206 standard; Protein; 101 AA.	
AC		
XX	AAM50206;	
DT	07-JAN-2002 (first entry)	
XX		
DE	Adenovirus death protein.	
KM	Adenovirus death protein; utroplakin II; vector;	
KM	transcriptional regulatory element; TRE; urothelial cell;	

XX	bladder cancer; human; gene therapy.
OS	Mastadenovirus 2.
PN	MO200172994-A2.
PD	04-OCT-2001.
XX	
Pf	21-MAR-2001; 2001MO-US09224.
PR	24-MAR-2000; 2000US-191861P.
XX	
PA	(CALY-) CALYDON INC.
PI	Yu D., Zhang H., Henderson DR:
DR	WPI: 2001-639229/73.
DR	N-PDB: AAI70186.
XX	
PT	Human urothelial cell specific uroplakin transcriptional regulatory sequences, useful for producing adenoviral vectors which can be used to confer selective cytotoxicity to target cells, especially bladder cancer cells -
XX	
PS	Example 6; Fig 12; 147pp; English.
XA	
CC	The present sequence is that of the adenovirus death protein (ADP).
CC	The ADP gene coding region (see AAI70186) was obtained by PCR
CC	amplification and used in the construction of adenoviral vectors in
CC	which ADP expression was under the control of a urothelial
CC	cell-specific transcriptional regulatory element (TRE) derived from
CC	the human uroplakin II gene 5' flanking region (see AAI70144). This
CC	is an example of adenoviral vectors of the invention. Such vectors
CC	control a gene, preferably an adenovirus gene, under transcriptional
CC	control of a urothelial cell-specific TRE. They display urothelial
CC	cell-specific cytotoxicity, and are used for the specific, targeted
CC	gene therapy of bladder cancer.
XX	
SO	Sequence 101 AA:
	Query Match 90.9%; Score 70; DB 22; Length 101;
	Best Local Similarity 100.0%; Pred. No. 9, 3e-62;
	Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy	1 MTGSA ^T A ^T PTD ^R RRNTATG ^L TSALIN ^I POVHAFVN ^D MA ^S LDKMKF ^S IALM ^F VCLIM ^I MLIC 60
Db	1 mgtstla ^r ptdy ^r ntatg ^t ltsaln ⁱ pyh ^a lvndw ^s aldm ^w stslmfvc ^l llm ^v ilic 60
Oy	61 CLKRRARRPP 70
Db	61 clxrrrarrpp 70
	RESULT 11
	AAB61866
ID	AAB61866 standard; Protein: 101 AA.
AC	AAB61866;
XX	
DT	08-MAY-2001 (first entry)
XX	
DE	Ad2 encoded adenovirus death protein (ADP).
XX	
KW	Adenovirus death protein; ADP; neoplastic; cell death; cancer therapy;
XX	anti-cancer; gene therapy; cytoskeletal; Ad2.
OS	Mastadenovirus.
XX	
EH	Key Location/Qualifiers
FT	Peptide 1..26
FT	/note= "fragment specifically claimed for"
FT	Domain 1..40

FT	Domain	/note=	"putative luminal domain (AAB61873)"
FT		41..59	
FT		/note=	"transmembrane domain (AAB61874); fragment specifically claimed for"
FT	Domain	63..70	
FT		/note=	"cytosolic basic proline domain (AAB61875) fragment specifically claimed for"
FT	Domain	60..101	
FT		/note=	"cytoplasmic-nucleoplasmic domain"
PN	MO200104282-A2.		
XX			
PD	18-JAN-2001.		
XX			
PP	12-JUL-2000: 2000MO-US18971.		
XX			
PR	12-JUL-1999: 990US-0351778.		
XX			
PA	(UYSL-) UNIV SAINT LOUIS.		
XX			
PI	Wold WSM, Toth K, Doronin K, Tollefson AE;		
XX			
DR	WPI; 2001-103079/71.		
XX			
PT	Recombinant vector which is replication-competent in a neoplastic cell		
PT	and overexpresses an adenovirus death protein, useful in cancer therapy		
PT	when used together with replication-defective adenovirus which		
PT	expresses an anti-cancer gene -		
XX			
PS	Claim 5; Page 156; 196pp: English.		
XX			
CC	The invention relates to a recombinant vector (VI) which is replication-		
CC	competent in a neoplastic cell and which overexpresses an adenovirus		
CC	death protein (ADP). The vector can be used in a method for promoting		
CC	death of a neoplastic cell that comprises contacting the neoplastic cell		
CC	with at least one VI; and a composition comprising VI and a second		
CC	recombination virus which is: (a) replication defective and which		
CC	expresses an anti-cancer gene product, where VI complements replication		
CC	of the second recombinant virus; or (b) replication-competent in a		
CC	neoplastic cell. VI, together with one or more replication-defective		
CC	adenovirus which expresses an anti-cancer gene product, are useful in		
CC	cancer therapy. Overexpression of ADP by VI results in faster lysis of		
CC	cells and spread of the virus throughout a cell monolayer than viruses		
CC	expressing wild-type levels of ADP. The present sequence represents the		
CC	amino acid sequence of an ADP encoded by Ad2.		
XX			
XX			
SO	Sequence 101 AA:		
Query Match	90.9%:	Score 70:	DB 22: Length 101:
Best Local Similarity	100.0%:	Pred. No. 9.3e-6:	
Matches 70: Conservative	0:	Mismatches 0:	Indels 0: Gaps 0:
OY	1 MTGSIATFTDYRNTATGTSALNLPQVHAFVNDWASLDMWFSTLMMVCLIMMLC 60		
Db	1 mgsstleptdyrntatgtsalsnlpqvhafvndwasldmwfstlmmvclimmlc 60		
OY	61 CLKRRRARPP 70		
Db	61 CLKRRRARPP 70		
RESULT 12			
AAVS9925			
ID	AAVS9925 standard; Protein; 101 AA.		
XX			
XX	AAVS9925;		
XX			
XX	11-JAN-1999 (first entry)		
DT			
DE	Adenovirus death protein.		
XX			
XX	Adenovirus death protein; ADP; transcription regulatory element;		
KM			

PA (UYSL-) UNIV SAINT LOUIS.
 XX Moid WSM, Toch K, Doronin K, Tollefson AE;
 PI WPI: 2001-103079/11.
 DR
 XX
 PT Recombinant vector which is replication-competent in a neoplastic cell
 PT and overexpresses an adenovirus death protein, useful in cancer therapy
 PT when used together with replication-defective adenovirus which
 PT expresses an anti-cancer gene -
 PS
 XX
 PS Claim 5; Page 157; 196pp; English.
 XX The invention relates to a recombinant vector (V1) which is replication-
 CC competent in a neoplastic cell and which overexpresses an adenovirus
 CC death protein (ADP). The vector can be used in a method for promoting
 CC death of a neoplastic cell that comprises contacting the neoplastic cell
 CC with at least one V1; and a composition comprising V1 and a second
 CC recombinant virus which is: (a) replication defective and which
 CC expresses an anti-cancer gene product, where V1 complements replication
 CC of the second recombinant virus; or (b) replication-competent in a
 CC neoplastic cell. V1, together with one or more replication-defective
 CC adenovirus which expresses an anti-cancer gene product, are useful in
 CC cancer therapy. Overexpression of ADP by V1 results in faster lysis of
 CC cells and spread of the virus throughout a cell monolayer than viruses
 CC expressing wild-type levels of ADP. The present sequence represents the
 CC amino acid sequence of an ADP encoded by Ad6.
 XX
 SQ Sequence 95 AA;

Query Match 39.0%; Score 30; DB 22; Length 95;
 Best Local Similarity 100.0%; Pred. No. 3.8e-22;
 Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 41 MMFSLAMFVCLIMWLICCLRRARRPP 70
 ||||||||||||||||||||||||||||
 DB 35 mwfslamfvcylimwlicclrrarrpp 64

RESULT 15

AAB61872
 ID AAB61872 standard; Protein: 84 AA.
 XX
 AC AAB61872;
 XX
 DT 08-MAY-2001 (first entry)
 XX
 DE Ad2 ADP mutant d1737.
 XX
 KM Adenovirus death protein; ADP; neoplastic; cell death; cancer therapy;
 KM anti-cancer; gene therapy; cytostatic; Ad2; mutant.
 XX
 OS Mastadenovirus.
 XX
 PN MO200104282-A2.
 XX
 PD 18-JAN-2001.
 XX
 PF 12-JUL-2000; 2000MO-US18971.
 XX
 PR 12-JUL-1999; 99US-0351778.
 XX
 PA (UYSL-) UNIV SAINT LOUIS.
 PI Moid WSM, Toch K, Doronin K, Tollefson AE;
 XX WPI: 2001-103079/11.
 XX
 PT Recombinant vector which is replication-competent in a neoplastic cell
 PT and overexpresses an adenovirus death protein, useful in cancer therapy
 PT when used together with replication-defective adenovirus which
 PT expresses an anti-cancer gene -

XX Example 9; Fig 20; 196pp; English.
 PS
 XX
 CC The invention relates to a recombinant vector (V1) which is replication-
 CC competent in a neoplastic cell and which overexpresses an adenovirus
 CC death protein (ADP). The vector can be used in a method for promoting
 CC death of a neoplastic cell that comprises contacting the neoplastic cell
 CC with at least one V1; and a composition comprising V1 and a second
 CC recombinant virus which is: (a) replication defective and which
 CC expresses an anti-cancer gene product, where V1 complements replication
 CC of the second recombinant virus; or (b) replication-competent in a
 CC neoplastic cell. V1, together with one or more replication-defective
 CC adenovirus which expresses an anti-cancer gene product, are useful in
 CC cancer therapy. Overexpression of ADP by V1 results in faster lysis of
 CC cells and spread of the virus throughout a cell monolayer than viruses
 CC expressing wild-type levels of ADP. The present sequence represents the
 CC amino acid sequence of an Ad2 ADP mutant.
 XX
 SQ Sequence 84 AA;

Query Match 36.4%; Score 28; DB 22; Length 84;
 Best Local Similarity 100.0%; Pred. No. 3.3e-20;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MTGSTAPPTDYNRTTATCTLSALMLPQ 28
 ||||||||||||||||||||||||||||
 DB 1 mtgstapttdyrrttatctlsalmlpq 28

Search completed: June 21, 2002, 08:23:32
 Job time: 197 sec
